

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) Device for dynamic storage of objects along a conveying section between an input station and an output station, the device comprising:
 - an endless, flexible conveying means which is variably subdivided into a conveying strand and an idle strand, the conveying strand and the idle strand each having areas of variable lengths which move in opposite direction,
 - at least one carriage which can be moved in a plane of conveyance of the objects for changing the storage capacity of the device, the carriage having a first deflection for the conveying strand and a second deflection for the idle strand,
 - a first drive device for the conveying means disposed in the area of the input station and a second drive device for the conveying means disposed in the area of the output station, the first drive device and the second drive device being driven independently of each other with variable speed of conveyance and the endless, flexible conveying means being provided over its entire length at equal intervals with grippers for the objects,
wherein the conveying means includes a link chain, equipped with rotatable guide rollers and which runs at least in some areas in at least one stationary guide rail,
wherein the link chain includes a plurality of chain links and wherein at least one rotatable guide roller is arranged movably on the respective chain links,
wherein the rotatable guide roller is connected by articulation to the respective chain link by means of a pivoted lever,
wherein the pivoted lever can be fixed, in the position in which the movable guide roller is engaged with the stationary guide rail, to the respective chain link in such a manner that it can be detached.
2. (Previously Presented) Device according to Claim 1, wherein the grippers include elastic passive gripping pliers, which fix the objects on the conveying means.
3. (Previously Presented) Device according to Claim 1, wherein the grippers include controllable active gripping pliers, which fix the objects on the conveying means.

4. (Previously Presented) Device according to Claim 1, wherein the grippers are adapted to grip the bottles under a thickened region provided heads of the bottles.

5. (Previously Presented) Device according to Claim 1, wherein the grippers grip the objects with positive lock.

6. (Previously Presented) Device according to Claim 1, wherein the grippers are arranged rigidly on the conveying means.

7. (Previously Presented) Device according to Claim 1, wherein the grippers are arranged movably on the conveying means.

8. (Previously Presented) Device according to Claim 7, wherein two or more grippers are combined to form a structural unit, with the structural unit arranged in a pivotable manner on the conveying means, such that when the structural unit is in a first position, a connection line between the grippers of the structural unit is substantially parallel to the conveying means and, when the structural unit is in a second position, the connection line is substantially transverse to the conveying means.

9. (Previously Presented) Device according to Claim 8, wherein the position of the structural unit is controllable such that in the area of the input station and the output station, the connection line is substantially parallel to the conveying means and in intermediate areas, the connection line is substantially transverse to the conveying means.

10. (Canceled)

11. (Currently Amended) Device according to Claim [[10]] 1, wherein the link chain, in the area where the carriage moves, runs in parallel, on two stationary guide rails.

12. (Previously Presented) Device according to Claim 11, wherein the parallel guide rails, at least in the area in which the carriage moves, present a curve-shape.

13. (Previously Presented) Device according to Claim 12, wherein a middle axis of the curve-shape is arranged one of substantially horizontally or substantially vertically.

14. (Canceled)

15. (Currently Amended) Device according to Claim [[14]] 1, wherein the rotatable guide roller is impinged by a spring element which tends to keep the guide roller engaged with the stationary guide rail.

16. (Canceled)

17. (Canceled)

18. (Currently Amended) Device according to Claim [[17]] 1, wherein the pivoted lever can be reset by means of a control device between the position in which the guide roller engages the stationary guide rail and a position which is pivoted with respect to the former position.

19. (Currently Amended) Device according to Claim [[14]] 1, wherein the movable guide roller is mounted by means of at least one bolt to the respective chain link in such a manner that it can be shifted parallel to the rotation axis.

20. (Currently Amended) Device according to Claim [[14]] 1, wherein the movable guide roller is coupled to a thrust block which can be impinged by the carriage.

21. (Currently Amended) Device for dynamic storage of objects along a conveying section between an input station and an output station, the device comprising:

an endless, flexible conveying means which is variably subdivided into a conveying strand and an idle strand, the conveying strand and the idle strand each having areas of variable lengths which move in opposite direction,

at least one carriage which can be moved in a plane of conveyance of the objects for changing the storage capacity of the device, the carriage having a first deflection for the conveying strand and a second deflection for the idle strand,

a first drive device for the conveying means disposed in the area of the input station and a second drive device for the conveying means disposed in the area of the output station, the first drive device and the second drive device being driven independently of each other with variable speed of conveyance and the endless, flexible conveying means being provided over its entire length at equal intervals with grippers for the objects,

wherein the conveying means includes a link chain, equipped with rotatable guide rollers and which runs at least in some areas in at least one stationary guide rail,

wherein the link chain includes a plurality of chain links and wherein at least one rotatable guide roller is arranged movably on the respective chain links,

~~Device according to Claim 14, wherein on the respective chain link at least one double lever is pivotally mounted, and wherein the double lever carries guide rollers at both ends.~~

22. (Previously Presented) Device according to Claim 21, wherein the pivotable double lever can be fixed to the chain link by means of a ratchet arranged on the chain link.

23. (Currently Amended) Device according to Claim [[14]] 1, wherein the carriage has two guide arcs, curved in opposite directions, for the link chain, where end areas of the two guide arcs correspond to the guide rails and engage or disengage the link chain with or from the guide rails.

24. (Previously Presented) Device according to Claim 23, wherein the guide arcs present in their end areas one of slanted ramps or wedges working in cooperation with one of guide rollers or thrust blocks.

25. (Previously Presented) Device according to Claim 23, wherein the respective first and second deflections or the guide arcs are each arranged on a common frame in a manner which allows pivoting and provided with track rollers which engage on the guide rails.

26. (Previously Presented) Device according to Claim 1, wherein on the idle strand of the flexible conveying means, at least one elastically prestressed tension element engages.

27. (Currently Amended) Device according to Claim [[10]] 1, wherein the guide rails for the link chain include two parallel round rods.

28. (Currently Amended) Device for dynamic storage of objects along a conveying section between an entry station and an exit station, the device comprising:

an endless, flexible conveying means variably subdivided into a conveying strand and an idle strand, where the conveying strand and the idle strand each present areas with variable length, which can be moved in opposite directions,

at least one carriage, which can be moved in a plane of conveyance of the conveying means, for changing the storage capacity, the carriage having a first deflection for the conveying strand and a second deflection for the idle strand,

a first drive device for the conveying means in the area of the input station and a second drive device for the conveying means in the area of the output station, the first drive device and the second drive device being driven independently of each other with variable speed of conveyance,

the conveying means having a link chain including a plurality of chain links, the link chain equipped with rotatable guide rollers and running at least in some areas in at least one stationary guide rail, and with at least one guide roller arranged in a movable manner on the respective chain links,

wherein the movable guide rollers are connected by articulation to the respective chain links by means of a pivoted lever,

wherein the pivoted lever, in a position in which the movable guide roller is engaged with the stationary guide rail, is adapted to be fixed in a detachable manner on the respective chain links.

29. (Previously Presented) Device according to Claim 28, wherein the movable guide roller is impinged by a spring element tending to keep the guide roller engaged with the stationary guide rail.

30. (Canceled)

31. (Canceled)

32. (Currently Amended) Device according to Claim [[31]] 28, wherein the pivoted lever can be reset by means of a control device between the position in which the guide roller engages on a stationary guide rail and a position which is pivoted with respect to the former position.

33. (Previously Presented) Device according to Claim 28, wherein the movable guide roller is mounted by means of at least one bolt to the respective chain links in such a manner that it can be shifted parallel to the rotation axis.

34. (Previously Presented) Device according to Claim 28, wherein the movable guide roller is coupled with a thrust block which can be impinged by the carriage.

35. (Currently Amended) Device for dynamic storage of objects along a conveying section between an entry station and an exit station, the device comprising:

an endless, flexible conveying means variably subdivided into a conveying strand and an idle strand, where the conveying strand and the idle strand each present areas with variable length, which can be moved in opposite directions,

at least one carriage, which can be moved in a plane of conveyance of the conveying means, for changing the storage capacity, the carriage having a first deflection for the conveying strand and a second deflection for the idle strand,

a first drive device for the conveying means in the area of the input station and a second drive device for the conveying means in the area of the output station, the first drive device and the second drive device being driven independently of each other with variable speed of conveyance,

the conveying means having a link chain including a plurality of chain links, the link chain equipped with rotatable guide rollers and running at least in some areas in at least one stationary guide rail, and with at least one guide roller arranged in a movable manner on the respective chain links Device according to Claim 28,

wherein on the respective chain link, two double levers can be pivoted in a scissor-like manner with the levers carrying guide rollers on both ends.

36. (Previously Presented) Device according to Claim 28, wherein the carriage has guide arcs, curved in opposite directions, for the link chain, the guide arcs having end areas corresponding with the guide rails and engaging or disengaging the link chain with or from the guide rails.

37. (Previously Presented) Device according to Claim 36, wherein the guide arcs have in their end areas one of slanted ramps or wedges which work in cooperation with one of guide rollers, or thrust blocks, or ratchets.

38. (Previously Presented) Device according to Claim 36, wherein the two deflections and guide arcs are each arranged on a common frame in such a manner that they can be pivoted and provided with track rollers which engage on the guide rails.

39. (Previously Presented) Device according to Claim 28, wherein at least one elastically prestressed tension element engages on the idle strand of the flexible conveying means.

40. (Previously Presented) Device according to Claim 18, wherein the guide rails for the roller chain each present two parallel round rods.

41. (Currently Amended) Link chain equipped with rotatable guide rollers for a device for dynamic storage of objects along a conveying section between an input station and an output station, the device for the dynamic storage of objects including an endless, flexible conveying means which is variably subdivided into a conveying strand and an idle strand, the conveying strand and the idle strand each having areas of variable lengths which can be moved in opposite directions, at least one carriage which can be moved in the plane of conveyance for changing the storage capacity, the carriage having a first deflection for the conveying strand and a second deflection for the idle strand, a first drive device for the conveying means in the area of the input station and a second drive device for the conveying means in the area of the output station, the first drive device and the second drive device being driven independently of each other with variable speed of conveyance and the endless, flexible conveying means being provided over its entire length at equal intervals with grippers for the objects, the link chain comprising:

a plurality of chain links; and

at least one guide roller movably arranged on the respective chain links,

wherein the movable guide roller is attached by articulation to the respective chain link by means of a pivoted lever,

wherein the pivoted lever, in the position in which the movable guide roller is engaged with a stationary guide rail, can be fixed to the respective chain link in a detachable manner.

42. (Previously Presented) Link chain according to Claim 41, wherein the movable guide roller is impinged by a spring element.

43. (Canceled)

44. (Canceled)

45. (Previously Presented) Link chain according to Claim 41, wherein the movable guide roller is mounted by means of at least one bolt to the respective chain link in such a manner that it can be shifted parallel to the rotation axis.

46. (Previously Presented) Link chain according to Claim 41, wherein the movable guide roller is coupled with a thrust block.

47. (Currently Amended) Link chain equipped with rotatable guide rollers for a device for dynamic storage of objects along a conveying section between an input station and an output station, the device for the dynamic storage of objects including an endless, flexible conveying means which is variably subdivided into a conveying strand and an idle strand, the conveying strand and the idle strand each having areas of variable lengths which can be moved in opposite directions, at least one carriage which can be moved in the plane of conveyance for changing the storage capacity, the carriage having a first deflection for the conveying strand and a second deflection for the idle strand, a first drive device for the conveying means in the area of the input station and a second drive device for the conveying means in the area of the output station, the first drive device and the second drive device being driven independently of each other with variable speed of conveyance and the endless, flexible conveying means being provided over its entire length at equal intervals with grippers for the objects, the link chain comprising:

a plurality of chain links; and

at least one guide roller movably arranged on the respective chain links, Link chain according to Claim 41

wherein, on the respective chain link, at least one double lever is mounted in a manner which allows pivoting, where the lever carries guide rollers on both ends.

48. (Currently Amended) Link chain equipped with rotatable guide rollers for a device for dynamic storage of objects along a conveying section between an input station and an output station, the device for the dynamic storage of objects including an endless, flexible conveying means which is variably subdivided into a conveying strand and an idle strand, the conveying strand and the idle strand each having areas of variable lengths which can be moved in opposite directions, at least one carriage which can be moved in the plane of conveyance for changing the storage capacity, the carriage having a first deflection for the conveying strand and a second deflection for the idle strand, a first drive device for the conveying means in the area of the input station and a second drive device for the conveying means in the area of the output station, the first drive device and the second drive device being driven independently of each other with variable speed of conveyance and the endless, flexible conveying means being provided over its entire length at equal intervals with grippers for the objects, the link chain comprising:

a plurality of chain links; and

at least one guide roller movably arranged on the respective chain links,

wherein the movable guide roller is attached by articulation to the respective chain link by means of a pivoted lever, Link chain according to Claim 43,

wherein one of the pivoted lever or double lever can be attached by means of one of a snap-on connection or a ratchet to the respective chain link in a detachable manner.

49. (Previously Presented) Device according to Claim 1, wherein the grippers grip the objects with a friction lock.

50. (Previously Presented) Device according to Claim 8, wherein the structural unit is arranged in a pivotal manner on extension arms.

51. (Previously Presented) Device according to Claim 12, wherein the curve shape is one of circular, oval, spiral or coil shape.

52. (Currently Amended) Device according to Claim [[31]] 28, wherein the pivoted lever is fixed in a detachable manner on the respective chain link by means of one of a snap-on connection or a ratchet.

53. (New) Link chain according to Claim 47, wherein the double lever can be attached by means of one of a snap-on connection or a ratchet to the respective chain link in a detachable manner.